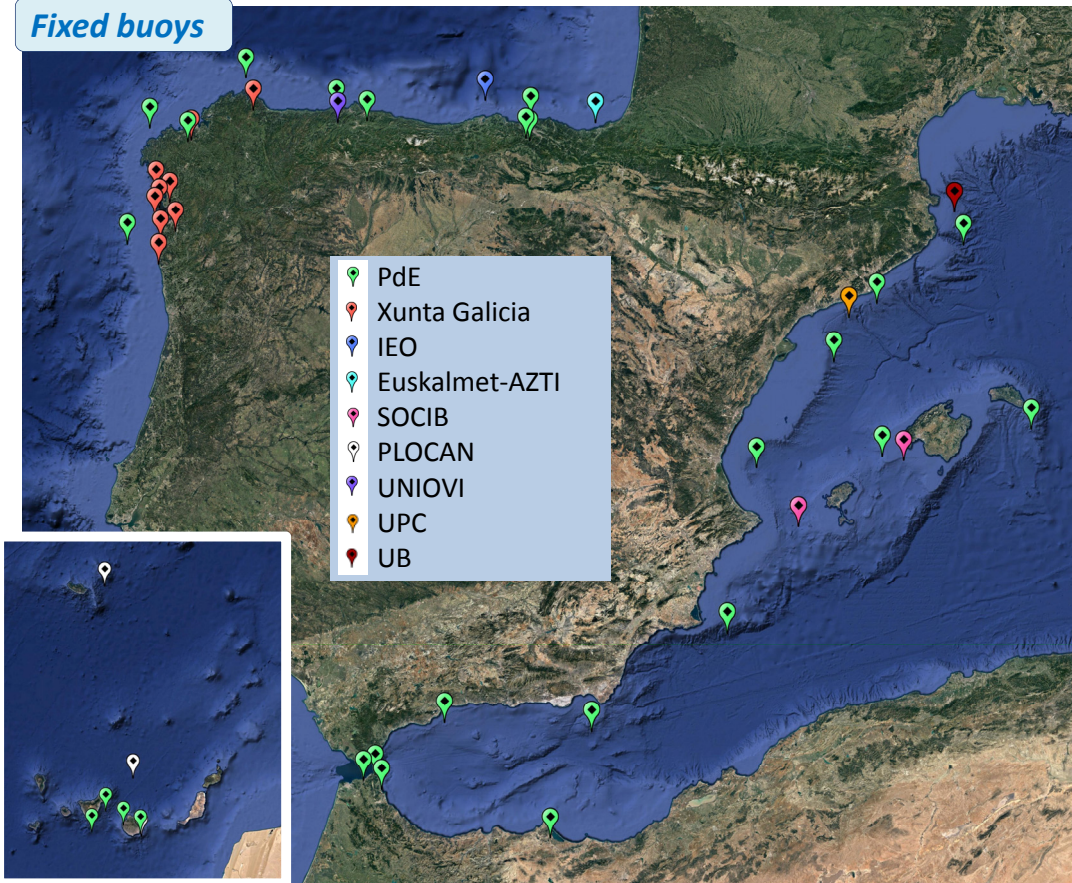


Fixed and Drifting Buoys around the National Spanish Waters

A. Lavín¹, E. Tel¹, J.L. Acuña², M. de Alfonso³, E. Álvarez³, M. Canals⁴, B. Casas⁵, A. Cianca⁶, M.L. Macho⁷, J. Mader⁸, P. Montero⁷, J.L. Pelegrí⁹, J. del Río¹⁰, M.I. Ruiz³, J. Tintoré⁵, S. Torres⁷, K. Salvador⁹, O. Sánchez⁹, A. Sanchez-Vidal⁴, P. Vélez-Belchi¹, A. Viloria¹.

Contact to: alicia.lavin@ieo.es

Fixed buoys



Improving the knowledge of the seas surrounding the Iberian Peninsula, Balearic and Canary islands is one of the objectives for the Spanish oceanographic community. For that purpose, a number of fixed and drifting buoys have been deployed in the last 25 years. Parameters measured included sea surface temperature and salinity, ocean current velocity, air temperature, humidity, wave characteristic and wind velocity. The national aim is to increase the quantity, quality, coverage and timeliness of atmospheric and oceanographic data. These observations are used immediately to improve forecast and therefore increase marine safety.

Although the main group of fixed buoys is formed by the PdE deep and shallow buoy networks, other well instrumented new platforms has been established in the last years. The Xunta de Galicia (RAIA project), PLOCAN, SOCIB, IEO, Euskalmet-AZTI, ICM-CSIC, as well as the Univ. Barcelona, Univ. Oviedo and Univ. Polytécnica de Catalunya who operates the Obsea observatory; thus completed the Observing System. Most of them are transmitting data by GTS.

Multidisciplinary sensors for dissolved oxygen, Fluorescence/Chlorophyll or pCO₂, among other parameters, has been mounted in the buoys and calibration/validation procedures have been developed in order to improving data quality. Antifouling systems recently developed have been also included and optical sensors upgraded.

Drifting Buoys



Drifting floats have increased in number and significance, from Argo floats to classical surface drifting ones, improving the Spanish contribution to IOC, WMO and JCOMM. Spain is member of EuroArgo-ERIC where SOCIB and IEO are the main contributors.

Concerning drifting buoys, ICM-CSIC and SOCIB are the main players. Other relevant targets involve technological development as well as data management. Beyond Spanish waters, the Equatorial Atlantic (TIC-MOC project), the Arctic Ocean (ICE-ARC project) and the South Atlantic Ocean (VA-DE-RETRO project) are the main studying areas by the Spanish oceanographic community.

(1) Instituto Español de Oceanografía (IEO), (2) Universidad de Oviedo (UNIOVI), (3) Puertos del Estado (PdE), (4) Universitat de Barcelona (UB), (5) Sistema de Observación Costero de las Islas Baleares (SOCIB), (6) Plataforma Oceánica de Canarias (PLOCAN), (7) Xunta de Galicia-Meteorología Intecmar-Cetmar, (8) Euskalmet-AZTI, (9) Instituto de Ciencias del Mar (ICM-CSIC), (10) Universitat Politècnica de Catalunya (UPC).